B.   REMARKS

No claims have been canceled or added in this reply. Hence, Claims 1, 3, 8-10, 12, 17-19, 21, 26-28, 30, 35, 36 and 57-68 are pending in this application. The amendments to the claims and the new claims do not add any new matter to this application. All issues raised in the final Office Action mailed September 1, 2006, are addressed hereinafter.

REJECTION OF CLAIMS 1-3, 8-10, 17-19, 21, 26-28, 30, 35 AND 36 UNDER 35 U.S.C. § 103(a)

In the final Office Action, Claims 1-3, 8-12, 17-21, 26, 27 and 37-51 are rejected under 35 U.S.C. § 103(a) as being unpatentable over *Pare, Jr. et al.*, U.S. Patent No. 6,834,109 (hereinafter *"Pare"*) in view of *Marchetto et al.*, U.S. Patent No. 5,513,215 (hereinafter *"Marchetto"*). It is respectfully submitted that Claims 1, 3, 8-10, 12, 17-19, 21, 26 and 27 are patentable over *Pare* and *Marchetto* for at least the reasons set forth hereinafter.

CLAIM 1

Claim 1 is directed to a communications receiver that recites:

"a time domain equalizer;
a frequency domain equalizer; and
an update mechanism configured to update both the time domain equalizer and the
        frequency domain equalizer based upon performance of a communications
        channel from which the communications receiver receives data, wherein updating
        the time domain equalizer includes
causing the time domain equalizer to operate with a first set of coefficients,
determining first performance data that reflects performance of the time domain
        equalizer when the time domain equalizer is operating with the first set of
        coefficients,
changing the coefficients used by the time domain equalizer so that the time
        domain equalizer operates with a second set of coefficients,
determining second performance data that reflects performance of the time
        domain equalizer when the time domain equalizer is operating with the a
        second set of coefficients,
selecting for use by the time domain equalizer, based upon the first performance
        data and the second performance data, either the first set of coefficients or
        the second set of coefficients,
if the first set of coefficients is selected for use, then changing the coefficients
        used by the time domain equalizer so that the time domain equalizer
        operates with the first set of coefficients, and
if the second set of coefficients is selected for use, then causing the time domain
        equalizer to continue to operate with the second set of coefficients."

It is respectfully submitted that Claim 1 recites one or more limitations that are not taught or suggested by *Pare* and *Marchetto*, considered alone or in combination. For example, it is respectfully submitted that at least the Claim 1 limitations directed to changing the set of coefficients that the time domain equalizer uses to operate, determining performance data when the time domain equalizer is operating with each set of coefficients, selecting for use either the first or second set of coefficients based upon the performance data and then causing the time domain equalizer to use the selected set of coefficients, which may include changing the coefficients used by the time domain equalizer back to the first set of coefficients, are not taught or suggested by *Pare* or *Marchetto*.

The final Office Action asserts that *Pare* does not teach or suggest these limitations and Applicant fully agrees with this assertion. The Office Action relies upon *Marchetto* for teaching these limitations and specifically, the text at Col. 27, line 50 through Col. 28, line 2.

Marchetto describes a radio receiver apparatus that includes first and second feedback equalizers that each uses a different set of coefficients. The radio receiver apparatus also includes an estimation means that selects the output of either the first or second feedback equalizer as being the most likely to correspond to the data transmitted to the radio receiver. It is respectfully submitted that there is no teaching or suggestion in *Marchetto* of changing the set of coefficients that the forward or reverse decision feedback equalizer uses to operate, determining performance data when the decision feedback equalizer is operating with each set of coefficients, selecting for use either the first or second set of coefficients based upon the performance data and then causing the decision feedback equalizer to use the selected set of coefficients, which may include changing the coefficients used by the decision feedback equalizer back to the first set of coefficients. In *Marchetto,* each time domain equalizer uses a single set of coefficients. Using two sets of coefficients with two different time domain equalizers as described in *Marchetto* is not functionally equivalent to changing the coefficients that a single time domain equalizer uses, since in *Marchetto*, the two time domain equalizers are functionally distinct. *Marchetto* describes that the first decision feedback equalizer sequentially processes the demodulated signal in a forward direction, while the second decision feedback equalizer sequentially processes the demodulated signal in a reverse direction. Thus, in *Marchetto*, the two decision feedback equalizers are not operating in the same manner and therefore cannot be

considered equivalent to a single time domain equalizer where the coefficients used by the single time domain equalizer are changed.

In view of the foregoing, it is respectfully submitted that Claim 1 recites one or more limitations that are not taught or suggested by *Pare* or *Marchetto* and is therefore patentable over *Pare* and *Marchetto*.

CLAIMS 3, 8 AND 9

Claims 3, 8 and 9 depend from Claim 1 and include all of the limitations of Claim 1. It is therefore respectfully submitted that Claims 3, 8 and 9 are patentable over *Pare* and *Marchetto* for at least the reasons set forth herein with respect to Claim 1.

CLAIMS 10, 12, 17 AND 18

Claims 10, 12, 17 and 18 recite limitations similar to Claims 1, 3, 8 and 9, except in the context of an update mechanism. It is therefore respectfully submitted that Claims 10, 12, 17 and 18 are patentable over *Pare* and *Marchetto* for at least the reasons set forth herein with respect to Claims 1, 3, 8 and 9.

CLAIMS 19, 21, 26 AND 27

Claims 19, 21, 26 and 27 recite limitations similar to Claims 1, 3, 8 and 9, except in the context of a method for configuring a communications receiver. It is therefore respectfully submitted that Claims 19, 21, 26 and 27 are patentable over *Pare* and *Marchetto* for at least the reasons set forth herein with respect to Claims 1, 3, 8 and 9.

REJECTION OF CLAIMS 57, 60, 63 AND 66 UNDER 35 U.S.C. § 103(a)

In the final Office Action, Claims 57, 60, 63 and 66 are rejected under 35 U.S.C. § 103(a) as being unpatentable over *Pare* in view of *Marchetto* and further in view of *Roberts et al.*, U.S. Patent No. 6,418,558 (hereinafter "*Roberts*"). Claims 57, 60, 63 and 66 depend from and include all of the limitations of Claims 1, 10, 19 and 28, respectively. As set forth herein, Claim 1 recites one or more limitations that are not taught or suggested by *Pare* or *Marchetto*. It is respectfully submitted that these limitations are also not taught or suggested by *Roberts*. For example, it is respectfully submitted that the Claim 1 limitations directed to changing the set of coefficients that the time domain equalizer uses to operate, determining performance data when the time

domain equalizer is operating with each set of coefficients, selecting for use either the first or second set of coefficients based upon the performance data and then causing the time domain equalizer to use the selected set of coefficients, which may include changing the coefficients used by the time domain equalizer back to the first set of coefficients are not taught or suggested by *Roberts*, and is recognized that *Roberts* is not relied upon for teaching these limitations. It is therefore respectfully submitted that Claims 57, 60, 63 and 66 recite one or more limitations that are not taught or suggested by *Pare*, *Marchetto* or *Roberts* and that that Claims 57, 60, 63 and 66 are therefore patentable over *Pare*, *Marchetto* and *Roberts*.

REJECTION OF CLAIMS 58, 59, 61, 62, 64, 65, 67 AND 68 UNDER 35 U.S.C. § 103(a)

In the final Office Action, Claims 58, 59, 61, 62, 64, 65, 67 and 68 are rejected under 35 U.S.C. § 103(a) as being unpatentable over *Pare* in view of *Marchetto* and further in view of *Drucker et al.*, U.S. Patent No. 6,243,414 (hereinafter "*Drucker*"). Claims 58, 59, 61, 62, 64, 65, 67 and 68 depend from and include all of the limitations of Claims 1, 10, 19 and 28, respectively. As set forth herein, Claim 1 recites one or more limitations that are not taught or suggested by *Pare* or *Marchetto*. It is respectfully submitted that these limitations are also not taught or suggested by *Drucker*. For example, it is respectfully submitted that the Claim 1 limitations directed to changing the set of coefficients that the time domain equalizer uses to operate, determining performance data when the time domain equalizer is operating with each set of coefficients, selecting for use either the first or second set of coefficients based upon the performance data and then causing the time domain equalizer to use the selected set of coefficients, which may include changing the coefficients used by the time domain equalizer back to the first set of coefficients are not taught or suggested by *Drucker*, and is recognized that *Drucker* is not relied upon for teaching these limitations. It is therefore respectfully submitted that Claims 58, 59, 61, 62, 64, 65, 67 and 68 recite one or more limitations that are not taught or suggested by *Pare*, *Marchetto* or *Drucker* and that Claims 58, 59, 61, 62, 64, 65, 67 and 68 are patentable over *Pare*, *Marchetto* and *Drucker*.

CONCLUSION

It is respectfully submitted that all of the pending claims are in condition for allowance and the issuance of a notice of allowance is respectfully requested. If there are any additional charges, please charge them to Deposit Account No. 50-1302.

The Examiner is invited to contact the undersigned by telephone if the Examiner believes that such contact would be helpful in furthering the prosecution of this application.

Respectfully submitted,

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